

#### ANTHONY LAWS BIRCH

INTELLECTUAL PROPERTY LAW
6915 BARRETT LANE
BETHESDA, MARYLAND 20814
USA



TELEPHONE: (301) 652-6647 E-MAIL: <u>ALBOFFICE1@AOL.COM</u> FAX: 301-657-4731

Monday, July 24, 2000

Attorney Docket No.: 2907-102P

#### **BOX PATENT APPLICATION**

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

As authorized by the inventors, transmitted herewith for filing is a patent application applied for on behalf of the inventors according to the provisions of 37 C.F.R. § 1.41(c).

Inventor(s):

Robert Scott NIEBOER

Pedro (Peter) V. BALCARCE

Ivan N. ZHIDOV

Micah James ELDRED

Vishnu V. RAM

Sreekanth VEMULAPALLI

For: DOUBLE DUTCH AUCTION FOR ESTABLISHMENT AND MAXIMIZATION OF SALES PRICE OF GENERIC FUNGIBLE ITEMS

#### Enclosed are:

<u>X</u>	A specification consisting of <u>15</u> pages
_	sheet(s) of <u>formal</u> drawings
	Certified copy of

- X Executed Declaration in accordance with 37 C.F.R. § 1.64 will follow.
- $\underline{X}$  A verified statement to establish small entity status under 37 C.F.R. § 1.9 and 37 C.F.R. § 1.27
- \_\_\_ Preliminary Amendment

- X Information Sheet
- Information Disclosure Statement, PTO-1449 and reference(s)
- Assignment with Recordation Cover Sheet

The filing fee has been calculated as shown below:

	,		LARGE ENTITY	SMALL ENTITY
	BASIC	FEE	\$690.00	\$345.00
	NUMBER FILED	NUMBER EXTRA	RATE FEE	RATE FEE
TOTAL CLAIMS	20 - 24 =	4	x 18 =	x 9 = \$72.00
INDEPENDENT CLAIMS	3 - 1 =	0	x 78 =	x 39 = \$0.00
MULTIPLE DEF CLAIMS PRESE			+ \$260.00	+ \$130.00
		TOTAL	\$	\$417.00

- The application transmitted herewith is filed in accordance with 37 <u>X</u> C.F.R. § 1.41(c). The undersigned has been authorized by the inventor(s) to file the present application. The original duly executed declaration together with the surcharge will be forwarded in due course.
- A check in the amount of \$417.00 to cover the filing fees is enclosed. X
- X Send correspondence to:

ANTHONY LAWS BIRCH

6915 Barrett Lane

Bethesda, MD 20814

Respectfully submitted,

Anthony Laws Birch

Reg. No.26,122

6915 Barrett Lane

Bethesda, MD 20814

(301) 652-6647

ALB/bb 2907-102P attachments

## IN THE U.S. PATENT AND TRADEMARK OFFICE

#### INFORMATION SHEET

Applicant: NIEBOER, Robert Scott et al.

Appl. No.: NEW

Filed: July 24, 2000

For: DOUBLE DUTCH AUCTION FOR ESTABLISHMENT

AND MAXIMIZATION OF SALES PRICE OF

GENERIC FUNGIBLE ITEMS

Inventor(s): NIEBOER, Robert Scott

217 Lynwood Terrace Nashville, TN 37205 Citizenship: USA

BALCARCE, Pedro (Peter) V. 1617 Maple Timber Court Antioch, TN 37013

Citizenship: USA

ZHIDOV, Ivan N.

3721 Hillbrook Court Nashville, TN 37211 Citizenship: RUSSIA

ELDRED, Micah James

510 Old Hickory Blvd., Apt. 1117

Nashville, TN 37209 Citizenship: USA

RAM, Vishnu V.

511 Chesterfield Avenue, Apt. 801

Nashville, TN 37212 Citizenship: INDIA

VEMULAPALLI, Sreekanth

97 White Bridge Road, Apt. K-1

Nashville, TN 37205 Citizenship: INDIA

Send correspondence to:

ANTHONY LAWS BIRCH 6915 Barrett Lane Bethesda, MD 20814 The above information is submitted to advise the U.S.P.T.O. of all relevant facts in connection with the present application.

A timely executed Declaration in accordance with 37 C.F.R. \$ 1.64 will follow.

Respectfully submitted,

Anthony Laws Birch

Reg. No.26,122

6915 Barrett Lane Bethesda, MD 20814

(301) 652-6647

ALB/bb 2907-102P

#### IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant:

Robert Scott NIEBOER et al.

Appl. No.:

not assigned

Group: not assigned

Filed:

July 24, 2000

Examiner: NOT ASSIGNED

For:

DOUBLE DUTCH AUCTION FOR ESTABLISHMENT

AND MAXIMIZATION OF SALES PRICE OF

GENERIC FUNGIBLE ITEMS

#### LETTER

Assistant Commissioner for Patents Washington, D.C. 20231

Monday, July 24, 2000

Sir:

Enclosed herewith is a Statement (Declaration) Claiming Small Entity Status (37 C.F.R. §§ 1.9(f) and 1.27(c)) - Small Business Concern ( $\boxtimes$  Original  $\square$  Photocopy) which should be made part of the record of the present application.

Respectfully submitted,

Birch, #26,122

ALB/bb 2907-102P Attachment

6915 Barrett Lane Bethesda, MD 20814

(301) 652-6647

STATEMENT CLAIMING SMALL ENTITY STATUS

(37 CFR 1.9(f) & 1.27(c)) - SMALL BUSINESS CONCERN

Docket Number: 2907-102P

Applicant, Patentee, or Identifier: Robert Scott NIEBOER et al.
Application or Patent No.: <u>not assigned</u> Filed or Issued: not assigned
Title: DOUBLE DUTCH AUCTION FOR ESTABLISHMENT AND MAXIMIZATION OF SALES PRICE
OF GENERIC FUNGIBLE ITEMS
I hereby state that I am
the owner of the small business concern identified below:
$\overline{\boxtimes}$ an official of the small business concern empowered to act on behalf of
the concern identified below:
NAME OF SMALL BUSINESS CONCERN 5th Market, Inc.
ADDRESS OF SMALL BUSINESS CONCERN 104 Woodmont Blvd., Suite 200
Nashville, Tennessee 37205
I hereby state that the above identified small business concern qualifies as a small business concern as defined in 37 CFR Part 121 for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time, or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.
I hereby state that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:
$oxed{\boxtimes}$ the specification filed herewith with title as listed above.
the application identified above.
the patent identified above.
If the rights held by the above identified small business concern are not exclusive, each individual, concern, or organization having rights in the invention must file separate statements as to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).
Each person, concern, or organization having any rights in the
invention is listed below:
no such person, concern, or organization exists.  each such person, concern, or organization is listed below.
each such person, concern, or organization is fisted below.
5th Market, Inc.
Separate statements are required from each named person, concern, or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)
I acknowledge the duty to file, in this application or patent, notification of
any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is not longer appropriate. (37 CFR 1.28(b))
NAME OF PERSON SIGNING Robert Scott NIEBOER
TITLE IN ORGANIZATION OF PERSON SIGNING Chief Executive Officer
ADDRESS OF PERSON SIGNING 217 Lynwood Terrace, Nashville, TN 37205
SIGNATURE DATE 7/20/00

10

15

20

25

30

# DOUBLE DUTCH AUCTION FOR ESTABLISHMENT AND MAXIMIZATION OF SALES PRICE OF GENERIC FUNGIBLE ITEMS

## **BACKGROUND OF THE INVENTION**

#### Cross-Reference To Related Applications

This application is a continuation-in-part of Applicants' prior application Serial No. 09/359,686 filed July 23, 1999, assigned to the same assignee. The disclosure of that prior application is incorporated herein by reference.

#### Field of the Invention

The present invention relates to a method and system for establishing and maximizing the price of fungible items through the use of two or more interdependent auctions of two or more sets of fungible items conducted substantially simultaneously. More specifically, the present invention relates to such a process and system implemented in an electronic trading network wherein the fungible items in preferred embodiments may be securities such as stocks, bonds and instruments related thereto.

## **Description of Background Art**

Convertible bonds, by their nature, are sensitive to the common stock into which they are convertible (underlying securities). Many investors in convertible securities purchase them at the original issuance as well as in the secondary market. However, many potential investors in securities do not have the opportunity to purchase convertibles upon original issuance in a manner consistent with their investment philosophies, specifically hedge funds. In order to understand the uses of the invention, one must understand that increasing the number of potential buyers of an issue could have a positive impact on the ability of the issuer or underwriter to attain a higher price level and that each buyer will attempt to attain its own objectives.

Currently, new issues of convertible securities are managed by underwriters who are contracted by issuers to sell convertible securities on the issuers' behalf into the capital markets. Underwriters have many tools at their disposal when selling securities, salesmen, road shows, management's time, and relationships with customers among a few. Typically, at the end of the selling

10

15

20

25

30

process, customers of the underwriter will indicate a level of interest in the securities by indicating the amount they would like to purchase. Some of these indications will be price sensitive and some will be noncompetitive. The underwriter and issuer decide the price of the newly issued securities and allocate the issue to buyers. Most securities are priced and allocated while the market is closed.

In the past few years, a new mechanism for issuing corporate securities has emerged: the Dutch auction. While the Federal Reserve Bank has used a similar process to issue government bonds for years, the process has been reinvented for corporate and municipal securities with the most recent offering being the auction of a municipal bond issue. The procedure involves the establishment of a single price for all allocations in a Dutch auction offering of securities. Generally, anyone bidding below the final price received no allocation and anyone bidding above the price receives a full allocation up to his indicated buy interest (those who were bidding the same price as the established price are given a proration.) Buyers can place multiple bids for different quantities at different prices. The issue price is established by searching for the first price in which the cumulative quantities for which bids at that price or higher equal or exceed the quantity to be sold in the auction.

Hedge funds in the convertible securities space are, by their nature, relative value participants. They attempt to purchase convertible securities when they believe they are cheap relative to the underlying common stock. When they make a purchase they generally sell or short the underlying stock in some "hedge" ratio in order to lock-in the value (cheapness) until the convertibles can be sold and the stock simultaneously re-purchased. These participants generally like to purchase convertibles while **simultaneously** selling the underlying common stock, but the new issue process, by its nature, precludes this practice. Firstly, the markets are closed when pricing occurs so they cannot sell or short the underlying common, and secondly, they are considered a less desirable buyer in any underwriting because of their after-market selling tendencies. Accordingly, a need in the art exists for a process that alleviates both problems

10

15

20

25

and provides the underwriter and issuer a more visible picture of demand for the new issue.

## Summary of the Invention

Accordingly, it is a primary object of the present invention to utilize multiple interdependent auctions for multiple potential buyers that will establish and maximize prices for fungible items such as new issues of securities offered by underwriters to multiple buyers in the respective auctions.

The objects of the present invention are fulfilled by providing a process for the establishment and maximization of the sale price of generic fungible items comprising the steps of:

conducting a primary auction for the sale of the generic fungible items based on purchase orders at fixed prices and/or conditional orders at prices contingent upon the sale of items in a second set of fungible items;

simultaneously conducting a secondary auction for the sale of said second set of fungible items; and

completing sales in the primary auction based on sales results in the secondary auction thereby establishing and maximizing the sales price of said generic set of fungible items as an interdependent function of sales prices of the second set of fungible items.

The generic fungible item may be a new issue convertible bond of an underwriter and the second set of fungible items is common stock convertible with respect to the convertible bonds.

The process may further include the steps of:

conducting a tertiary auction simultaneously with the primary and secondary auctions for a third set of fungible items having contingencies relating to the sale of the generic fungible items and/or the second set of fungible items.

The conditional order are orders contingent upon the sale of items in the second set of fungible items are in the form of algorithms with constraints thereon that represent a willingness to transact, where price is a dependent variable of the algorithm within the constraints and the price of another security is an independent variable of the algorithm.

30

10

15

20

25

30

The objects of the present invention and specific embodiments thereof will become more readily apparent hereinafter.

## <u>Detailed Description of Preferred Embodiments</u>

The system and process of the present invention for new issuances of convertible securities, dubbed Double Dutch, herein starts with a single Dutchtype auction where the "price" is the Conversion premium (the higher the conversion premium, the better for the issuers). Price can also be thought of as "conversion premium to the last trade" or "conversion premium to the print" where higher premium levels are more desirable to the issuers ("print" or "printed price" is the price of another security in a simultaneous auction). Any of these definitions of price would yield the same "order" of desirability for the issuer in the What makes the auction of the present invention different is the potential reliance of some bids on the results of another auction. The auction of the present invention provides buyers the ability to enter orders for securities contingent upon selling other securities in another auction or contingent upon the price result of another auction. It also allows these buyers to create algorithms establishing the price and quantities they are willing to buy to be derived form the price quantities they receive from the other auction. In other words, one buyer may be willing to pay a 26% conversion premium for \$1,000,000 bonds if he can short 30,000 shares of stock (the 26% is based upon the price of the short) and the auction of the present invention allows him to make that bid because we create another simultaneous auction for the underlying stock. attainable for the underlying 30,000 of stock in the secondary auction would create a bid for the bonds in which he would be allocated bonds in the primary auction, securities would be provided as supply to the secondary auction. This simple view is complicated by multiple buyers with different hedge ratios intermingled with non-contingent bids in the primary auction yielding different quantities of supply to the secondary auction. Of some interest is the condition that the bidder in the primary auction who is bid is contingent on selling in the secondary or "underlying" auction may also wish to borrow the underlying securities if he makes a sale in the secondary auction; providing demand in a tertiary "stock loan" auction. Buyers of securities in the secondary auction, in this

10

15

20

25

30

case, may be willing to loan securities in the tertiary auction thus providing supply to the tertiary stock loan auction. In this way, demand in the primary creates supply in the secondary and supply in the secondary creates demand in the tertiary while demand in the secondary auction creates supply in the tertiary auction. Of particular importance is the relationship of supply in one auction to the price result of another auction. This intertwines all auctions and requires a rules-based equilibrium to be established.

The main reason this has economic value is because new channels of demand are opened. One obvious channel is the hedge community and its willingness to enter the contingent orders, but a much larger and less obvious source of buyers comes from typical buyers of common stock (the demand side of the secondary auction). These bidders of common will have their bids "translated" to the primary auction into bids for bonds through the "stock sensitive" or "contingent" bidders in the primary auction. In other words, the bidders (and buyers) of common stock will buy the stock from those purchasers of bonds desiring to sell or short the stock in a simultaneous transaction to the purchase of their bonds from the underwriter.

#### **Examples**

Example A. A simultaneous interdependent process for the establishment and maximization of the sale price of generic fungible items where some of the purchase orders for these items rely upon a simultaneous sale of items belonging to a second set of generic fungible items in a secondary auction.

Example B. A simultaneous interdependent process for the establishment and maximization of the issue price and size (quantity) in a new issue convertible bond underwriting where some of the purchase orders for bonds rely upon a simultaneous sale of common stock in a secondary auction. This example is a specific use-care of Example A.

Example C. A multiple simultaneous interdependent process for the establishment and maximization of the issue price and size (quantity) in a new issue convertible bond underwriting where some of the purchase orders for bonds rely upon a simultaneous sale of common stock in a secondary auction and where some of the sale orders for stock in the secondary auction are not

5

only contingent upon purchasing bonds in the primary auction, but are also contingent upon borrowing stock a tertiary stock loan auction in which some of the orders to lend stock in the tertiary auction are also contingent on the purchase of stock in the secondary auction.

Anyone skilled in the art will be able to use these examples and the related disclosure of the invention to extend or alter the process to allow for its use in transactions involving other financial instruments and non-financial items within the spirit and scope of the present invention.

#### **Details of Example A**

10 Supply: (Primary Auction)

A merchant wishes to sell 20 units of Product A using a Double-Dutch Auction.

**Outright Demand: (Primary Auction)** 

Buyers of Product A in the Double Dutch auction are listed below.

Orders
This buyer is willing to pay \$10.00 for one unit, \$8.50 for two more units, and \$7.50 for eight more units of Product A.
This buyer is willing to pay \$9.00 for 3 units, and \$7.75 for four more units of Product A.
This buyer is willing to pay \$8.00 for 2 units, and \$7.25 for three more units of Product A.
This buyer is willing to pay \$7.00 for ten units of Product A.

Sorted by price, this demand is represented in the following table. The last column is the cumulative demand quantity representing total purchase interest at or above that price. Notice that the total amount of "buy interest" at prices of \$7.50 or above is 20 units of Product A.

Table A-1

Buyer	Quantity	Price	Cumulative
	(units)		Quantity
#1	1	\$10.00	1
#2	3	\$9.00	4
#1	2	\$8.50	6
#3	2	\$8.00	8
#2	4	\$7.75	12
#1	8	\$7.50	20
#3	3	\$7.25	23
#4	10	\$7.00	33

In a typical Dutch auction, the price for everyone would be \$7.50. Buyer #1 would purchase eleven units, Buyer #2 would purchase seven units and Buyer #3 would purchase two units of Product A while Buyer #4 would be shutout. Had the selling merchant attempted to sell 10 units, the price would have been \$7.50. Contingent Demand: (Primary Auction)

Listed below are buyers who are willing to buy Product A if they can sell Product B.

Table A-2

		Buy	Sell		
Buyer	Quantity of	Price of	Quantity of	Price of	
	Product A	Product A	Product B	Product B	
#4	6 units	\$9.00	3 units	\$16.00	
#5	2 units	\$8.25	1 units	\$14.00	
#6	4 units	\$7.00	2 units	\$16.00	

10

15

## **Outright Demand: (Secondary Auction)**

Buyers for Product B in the secondary auction are listed below:

Table A-3

Buyer	Quantity	Price	Cumulative
			Quantity
#7	2	\$18.00	2
#8	2	\$14.75	4
#9	3	\$14.00	7

# **Electronic Matching of Supply with Demand:**

A quick view of the auction landscape shows four buyers of Product A, three buyers of Product A if they can sell Product B, and three buyers of Product B in addition to our original merchant seller of 20 units of Product A.

Initially assume that the price of Product B will be the highest bid. Start at the top of Table A-3 with price of Product B at \$18.00 and translate all of the bids in Table A-2 into bids for Product A using this assumed price result of the Product B auction. The following Table shows this translation.

Table A-2

Buyer	Price of	Quantity of	Price of	Quantity of	Translated
	Product A	Product A	Product B	Product B	Price of
					Product A
#4	\$9.00	6 units	\$16.00	3 units	\$10.00
#5	\$8.25	2 units	\$14.00	1 units	\$10.25
#6	\$7.00	4 units	\$16.00	2 units	\$8.00

If Buyer #4 sells Product B at \$18.00, he is willing to pay \$10.00 for Product A (the extra profit from selling 3 units of Product B (\$2.00 each) divided by the six units of Product A he wishes to purchase -- 3\*(\$18.00-\$16.00) / 6 + \$9.00 = \$10.00. If Buyer #5 sells Product B at \$18.00, he is willing to pay \$10.25 for Product A and if Buyer #6 sells Product B at \$18.00 he is willing to pay \$8.00 for Product A. These new values are be integrated with Table A-1 to create the following Table A-4.

Table A-4

Buyer	Price	Quantity	Cumulative	Quantity to	Cumulative
		Units	Quantity	be sold	Qty. to be sold
				(Units of B)	(Units of B)
#5	\$10.25	3	3	1	1
#1	\$10.00	1	4		1
#4	\$10.00	6	10	3	4
#2	\$9.00	, 3	13		4
#1	\$8.50	2	15		4
#3	\$8.00	2	17		4
#6	\$8.00	4	21	2	6
#2	\$7.75	4	25		6
#1	\$7.50	8	33		6
#3	\$7.25	3	36		6

If the auction price of Product B is \$18.00, buyers #4, #5 and #6 have to sell 6 units of Product B. Supply outnumbers demand at this price and is inconsistent with the auction rules.

The next lower price in the Product B auction, \$14.75, is examined in the same manner. This creates bids in the Product A auction of:

Buyer	Price	Quantity	Cumulative	Units of B to be
			Quantity	sold
#1	\$10.00	1 units	1	
#2	\$9.00	3	4	
#5	\$8.50	3	7	3
#1	\$8.50	2	9	
#4	\$8.375	6	15	1
#3	\$8.00	2	17	
#2	\$7.75	4	21	
#1	\$7.50	8	29	
#3	\$7.25	3	32	

5

10

#6 \$6.375 4 36 2

In addition, a quantity in the item b auction of four units. This matches with the demand at 14.75 for item b. The table below lists the results of both auctions by user. Price to all purchasers of item A is \$7.75 and to all sellers and buyers of item b it is \$14.75.

Participant	Quantity A	Quantity B	Quantity B Sold
	Purchased at \$7.75	Purchased at \$14.75	at \$14.75
1	3 units		
2	6 units		
3	2 units		
4	6 units		3 units
5	3 units		1 units
6			
7		2 units	
8		2 units	
Total	20 units	4 units	4 units

Details of Examples B and C can be developed in a similar manner.

The invention being thus described, it will be obvious that the same may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and scope of the invention, and all such modifications as would be obvious to one skilled in the art are intended to be included within the scope of the following claims.

10

#### **CLAIMS**

1. A process for the establishment and maximization of the sale price of generic fungible items comprising the steps of:

conducting a primary auction for the sale of the generic fungible items based on purchase orders at fixed prices and/or conditional orders at prices contingent upon the sale of items in a second set of fungible items;

simultaneously conducting a secondary auction for the sale of said second set of fungible items; and

completing sales in the primary auction based on sales results in the secondary auction thereby establishing and maximizing the sales price of said generic set of fungible items as an interdependent function of sales prices of the second set of fungible items.

- 2. The process of claim 1 wherein the generic fungible item is a new issue convertible bond of an underwriter and the second set of fungible items are common stock convertible with respect to the convertible bonds.
  - 3. The process of claim 1 including the further steps of:

conducting a tertiary auction simultaneously with the primary and secondary auctions for a third set of fungible items having contingencies relating to the sale of the generic fungible items and/or the second set of fungible items.

4. The process of claim 2 including the further steps of:

conducting a tertiary auction simultaneously with the primary and secondary auctions for a third set of fungible items having contingencies relating to the sale of the generic fungible items and/or the second set of fungible items.

- 5. The process of claim 4 wherein the tertiary fungible items are orders to loan stock, and said orders may be contingent upon the purchase of stock in the secondary auction.
- 6. The process of claims 1 to 5 wherein sales prices of orders per unit are maximized as a function of order quantity electronically compared with quantities in orders within each respective simultaneous auction.
- 7. The process of claim 1 wherein the generic fungible items are security instruments, and the conditional orders contingent upon the sale of items in the second set of fungible items are in the form of algorithms with constraints thereon that represent a willingness to transact, where price is a dependent variable of the algorithm within the constraints and the price of another security is an independent variable of the algorithm.
- 8. The process of claim 7 wherein the order price of a conditional order, as represented by the algorithm, includes an order quantity subject to another algorithm.
- 9. The process of claim 7 wherein the conditional order algorithm can be represented as a line in two dimensional space with constraints having the price of one security as one axis and the price of another security as its other axis.
  - 10. The process of claim 7 wherein the instrument includes bonds.
  - 11. The process of claim 7 wherein the instrument includes warrants.
- 12. The process of claim 7 wherein the instrument variable may include multiple independent variables.

- 13. The process of claim 7 wherein the instrument includes options.
- 14. The process of claim 7 wherein the instrument includes futures.
- 15. The process of claim 7 wherein the instrument includes forward contracts.
- 16. The process of claim 7 wherein the instrument includes swap contracts.
- 17. The process of claim 7 wherein the price of the conditional order may be a yield.
- 18. The process of claim 7 wherein the price of the conditional order may be a volatility.
- 19. The process of claim 7 wherein the price of the conditional order may be a yield spread.
- 20. The process of claim 7 wherein one of the conditions of the conditional order is the requirement that another security is traded contemporaneously.
- 21. The process of claim 7 wherein one of the conditions of the conditional order is that no transaction can occur when the independent price is above or below set limits.

- 22. The process of claim 7 wherein one of the conditions of the conditional order is that the price is not to exceed a specified level regardless of the results produced by the algorithm.
- 23. The process of claim 7 wherein one of the conditions of the conditional order is that the price is not to be less than a specified level regardless of the results produced by the algorithm.
- 24. The process of claim 7 wherein one of the conditions of the conditional order is the requirement that the orders be match/compared without use of prices fed from said external multiple exchanges.

## ABSTRACT OF THE DISCLOSURE

A process and system that maximizes the sale price of a set of fungible items by allowing multiple independent parties to input purchase or sale orders for the items, which orders may be either dependent on or independent of the results of the maximization of the sale price of another set of fungible items for which multiple independent parties input purchase and sale orders that may be dependent on or independent of the results of the price maximization of a third set of items and where the price maximization of the secondary set of items may be dependent upon the result of the maximization of the first set of items and the maximization of the sale price of the third set of fungible items for which multiple independent parties input purchase and sale orders may be dependent upon the maximization of the sale price of the secondary set of items; thus allowing the sale price of up the three sets of fungible items to be interdependent.